

REMARKS

Claims 1-13 are pending in this application, with Claims 1, 7, and 13 being independent.

Applicant thanks the Examiner for the indication that the prior rejections based on U.S. Patent No. 5,702,490 to Kneip, et al. (hereinafter "Kneip") have been withdrawn.

Claims 1-13 are now rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Kneip and U.S. Patent No. 5,321,075 to Liles (hereinafter "Liles"). Applicant respectfully traverses this art rejection.

Reconsideration and withdrawal of the outstanding rejection is respectfully requested in view of the remarks set forth below.

The Claimed Invention

The presently claimed invention relates to methods for treating textiles and leathers to impart water resistance, including the steps of applying to the textile a composition comprising a silicone emulsion, where said silicone consists essentially of pre-cured silicone. The textile is then dried.

The presently claimed invention wherein a silicone emulsion consisting essentially of pre-cured silicone is applied to the surface of a textile or leather has the benefit of not causing discoloration or damaging the surface finish. Treatment methods using uncured silicone compounds do not offer these benefits, regardless of whether heat treatment is used for curing. (See specification, page 1, lines 21-25.) Applicant therefore teaches away from the use of uncured/non-crosslinked silicone compounds.

U.S. Patent No. 5,702,490 to Kneip

Kneip discloses a process for treating leathers/skins with carboxyl-containing polysiloxanes in an aqueous emulsion including emulsifiers, in order to impart water resistance to the leathers/skins. Kneip uses an emulsion containing polysiloxanes functionalized in a comb-like manner with side chains having spacer groups in the form of linear or branched alkylene groups having various substituents. It is disclosed at col. 2, lines 44-50, that the polysiloxanes are present as a *mixture of*

different forms, including “chain polymers (generally main components of the mixtures), branched siloxanes, cyclic siloxanes and crosslinked siloxanes.”

U.S. Patent No. 5,321,075 to Liles

Liles discloses a shelf-stable aqueous crosslinked silicone emulsion that yields a silicone elastomer upon removal of the water under ambient conditions. The emulsion is produced by combining a reactive polydiorganosiloxane present as an emulsion of dispersed particles in water, an acyloxysilane crosslinker, and a tin catalyst. It is disclosed at col. 6, lines 46-50, that the emulsion may be used to treat paper or fabric “by coating the substrate, then removing the water.” No disclosure is provided with regard to the method of treating such paper or fabric substrates, what benefits (such as water resistance) may be obtained by using such a treatment, or whether the treatment is suitable for use on leathers.

There is No Motivation to Combine Kneip and Liles

Applicant submits that one skilled in the art, having the disclosure of Kneip before him, would not be motivated to combine that disclosure with the disclosure found in Liles. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 16 USPQ2d 1430 (Fed. Cir. 1990).

Kneip does not disclose methods of treating textiles or leathers using compositions comprising silicone emulsions, where the silicone consists essentially of precured/crosslinked silicone. Instead, Kneip discloses that although some crosslinked siloxanes may be present incidentally as a result of the preparation process, the polysiloxanes are present as a mixture of different forms, with chain polymers being the main component. According to Kneip, the process for providing water resistance by treating the leathers and skins with carboxyl-containing polysiloxanes in an aqueous

emulsion in the presence of emulsifiers "comprises using polysiloxanes which are functionalized with carboxyl groups in a comb-like manner and in which the carboxyl groups are bonded to the polymer main chain via spacer groups." Kneip, col. 1, lines 51-57. These polysiloxanes functionalized in a comb-like manner are the compounds taught by Kneip to be useful for providing a water repellent treatment for leather and skins.

One skilled in the art would not look to Liles to modify the teachings of Kneip to arrive at the presently-claimed invention.

First, Liles does not disclose any polysiloxanes (whether crosslinked or not) that are functionalized with carboxyl groups in a comb-like manner. Polysiloxanes functionalized with carboxyl groups in a comb-like manner are taught by Kneip to be the compounds that are responsible for imparting water resistance. One skilled in the art would not be motivated to modify the teachings of Kneip with Liles, because material changes to the principles of operation expressed in Kneip would be required in order to do so.

Second, Liles fails to disclose that its precured/crosslinked silicone emulsion may be used to provide a water repellent coating for a paper or fabric, fails to disclose any details regarding the application of the precured/crosslinked silicone emulsion to the paper or fabric, and fails to disclose that its precured/crosslinked silicone emulsion may be applied to leathers. Again, one skilled in the art seeking to arrive at Applicant's claimed inventions would not be motivated to modify the teachings of Kneip with Liles.

Claims 1-13 Are Patentable Over the Combination of Kneip and Liles

As set forth in Applicant's prior Amendment, the claim language "consisting essentially of" found in each of independent Claims 1, 7, and 13 must be read to exclude use of uncured/non-crosslinked silicone compounds in practicing the presently claimed methods. Applicant's specification indicates that use of uncured/non-crosslinked silicone compounds causes undesirable discoloration and/or damage to the surface finish of the textile, regardless of curing process used.

Methods of applying compositions including uncured silicone compounds to a textile to be treated, as disclosed in Kneip, do not disclose or suggest Applicant's claimed methods of treating textiles (Claims 1-6) and leathers (Claims 7-13) using a silicone emulsion, where said silicone consists essentially of pre-cured silicone. Liles fails to remedy the deficiencies of Kneip, as it fails to disclose that a precured/crosslinked silicone emulsion may be applied to leather, and fails to disclose how to apply a precured/crosslinked silicone emulsion to a textile or leather. Further, for the reasons discussed above, Kneip cannot be properly combined with Liles to arrive at the claimed methods of treating textiles, and particularly leathers, using a silicone emulsion consisting essentially of pre-cured silicone, because this would materially change the characteristics of the process disclosed in Kneip.


Accordingly, Applicant submits that Claims 1-13 are not taught or suggested by the improper combination of Kneip and Liles, and respectfully requests that this grounds of rejection be withdrawn.

CONCLUSION

For at least the reasons set forth above, Applicant submits that Kneip and Liles may not be properly combined to form an obviousness rejection under 35 U.S.C. § 103(a), and respectfully requests withdrawal of the outstanding rejection. Applicant further submits that the presently claimed invention is allowable over the art of record, and respectfully requests prompt issuance of a notice thereof.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3500. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



Attorney for Applicant
Dawn C. Hayes
Registration No. 44,751

Patent Administrator
KATTEN MUCHIN ROSENMAN LLP
525 West Monroe Street
Chicago, Illinois 60661-3693
Facsimile: (312) 906-1021